## REMARKS/ARGUMENTS

Claims 1-11 were in the application as filed. In a previous paper, claims 1, 3-7, and 11 were canceled, and claims 12-20 were added. Claims 2, 8-10, and 12-20 are pending in the application.

In this Office Action, claims 2, 8-10, and 12-20 stand rejected under 35 U.S.C. §112, ¶2, and 35 U.S.C. §103(a). Claims 2, 8-10, and 12-20 stand provisionally rejected for alleged obviousness-type double patenting over claims 1-20 of Application Serial No. 10/713,305, and claims 12, 16-17, and 19-20 stand provisionally rejected for alleged obviousness-type double patenting over claims 7 and 8 of Application Serial No. 10/713,304.

In this Amendment and Response, claims 12, 15, 17, and 19 are amended. Reconsideration and reexamination of the application is respectfully requested in view of the foregoing amendments and the following remarks.

### Claim Rejections - 35 U.S.C. §112, ¶2

Claims 2, 8-10, and 12-20 stand rejected under 35 U.S.C. §112, ¶2, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is respectfully traversed.

Claims 12, 15, 17, and 19 have been amended by replacing the definite article "the" with the indefinite article "a", thereby removing the grounds for the rejection under 35 U.S.C. §112, ¶2.

For these reasons, claims 2, 8-10, and 12-20 are not unpatentable for indefiniteness. Applicants request the withdrawal of the rejection, and the allowance of claims 2, 8-10, and 12-20.

**Claim Rejections-Obviousness-Type Double Patenting**

Claims 2, 8-10, and 12-20 stand provisionally rejected as unpatentable over claims 1-20 of Application Serial No. 10/713,305. This rejection is respectfully traversed.

Claim 1 of the '305 application and claim 12 of the current application are the only independent claims in the respective applications. Claim 1 of the '305 application calls for

> A method of operating a dishwasher with a central control unit by measuring the turbidity of the rinsing liquid and establishing the course of the program as a function of the turbidity of the rinsing liquid, the program beginning with a pre-rinse program step, wherein that the turbidity is continuously measured in the pre-rinse program step with the lower and upper spray plane being operated in an alternating manner and the measured turbidity values are associated with the respective spray plane set in operation, in that, in addition, the increase in the turbidity values is detected, in that the length of time until the increase in the turbidity values has achieved the value zero is determined, in that difference values are formed from the respective turbidity values and a degree of soiling of the rinsing liquid according to quantity of soiling and solubility of the soiling on the dishes is derived from the turbidity values, the difference values and the length of time, and in that the further course of the rinse program in part program steps is established and accomplished as a function of the determined quantity of soiling and solubility of the soiling on the dishes (identical type of soiling).

Claim 12 of the current application calls for

> A method of cleaning dishes in a dishwasher in accordance with a programmed wash cycle implemented by a central control unit and comprising a rinse step where a rinse liquid is recirculated in the dishwasher and a cleaning step where a wash liquid is recirculated in the dishwasher, the method comprising:
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> determining a solubility of soil on the dishes to be cleaned; and
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> setting at least one operating parameter of the cleaning step based on the determined solubility.

Initially, the Examiner has failed to satisfy the requirements for sustaining an obviousness-type double patenting rejection. As stated in Section 804(II) of the MPEP:

> A double patenting rejection of the obviousness-type is "analogous to [a failure to meet] the nonobviousness requirement of 35 U.S.C. 103" except that the patent principally underlying the double patenting rejection is not considered prior art. *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967). Therefore, any analysis employed in an obviousness-type double patenting rejection parallels the

guidelines for analysis of a 35 U.S.C. 103 obviousness determination. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).

Since the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. 103(a) rejection, **the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are employed when making an obvious-type double patenting analysis**. These factual inquiries are summarized as follows:

(A) Determine the scope and content of a patent claim relative to a claim in the application at issue;

(B) Determine the differences between the scope and content of the patent claim as determined in (A) and the claim in the application at issue;

(C) Determine the level of ordinary skill in the pertinent art; and

(D) Evaluate any objective indicia of nonobviousness.

The conclusion of obviousness-type double patenting is made in light of these factual determinations.

**Any obviousness-type double patenting rejection should make clear:**

**(A) The differences between the inventions defined by the conflicting claims - a claim in the patent compared to a claim in the application; and**

**(B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue would have been an obvious variation of the invention defined in a claim in the patent**. (Emphasis provided).

The Examiner has failed to engage in the analysis required by *Graham, supra*, and has failed to identify the differences between the inventions defined by the conflicting claims, or the reasons why a person of ordinary skill in the art would conclude that the invention of claim 12 would have been an obvious variation of the invention defined in claim 1 of the '305 application. Thus, the rejection is improper and should be withdrawn.

Even if the rejection were proper, claims 2, 8-10, and 12-20 do not raise any double-patenting issues with the claims of Application Serial No. 10/713,305. According to the Office Action, the basis for the double-patenting rejection is that the conflicting claims, while not identical, are not patentably distinct from each other because the process as claimed in both applications is functionally equivalent.

Claim 1 of the '305 application calls for measuring the turbidity of a rinse liquid during which upper and lower spray planes are operated in an alternating manner, in determining when an increase in turbidity values is zero. Claim 12 of the current application calls for determining solubility of soil on dishes and setting at least one operating parameter of a cleaning step based on the determined solubility. Claims 1 and 12 are entirely different claims claiming entirely different elements. That is, claim 1 of the '305 application is directed to measuring the turbidity of the water, which is in contrast to claim 12 of the current application, which determines the solubility of the soils in the water based on turbidity. The sensing of turbidity and the determining of solubility from a turbidity value are two very distinct things. It appears the Examiner is equating the sensing of the turbidity with the determining of solubility based on turbidity, which Applicants respectfully submit is a fundamental error underpinning all of the bases of rejection by the Examiner. Therefore, the process in each application is not functionally equivalent to the process in the other, and the process in claim 12 is not unpatentable over the process in claim 1 for obviousness.

For these reasons, the amended claims are not unpatentable for obviousness-type double patenting. Applicants request the withdrawal of the rejection, and the allowance of amended claims.

Claims 12, 16-17, and 19-20 stand provisionally rejected as unpatentable over claims 7 and 8 of Application Serial No. 10/713,304. This rejection is respectfully traversed.

Claims 7 and 8 of Application Serial No. 10/713,304 describe a method establishing a rinse program in a dishwasher having upper and lower spray planes and a turbidity sensor incorporated into the inlet flow of the circulation pump and in communication with the spray planes. The method comprises alternately operating the upper and lower spray planes, measuring turbidity values associated with the upper and lower spray planes, deriving a difference value between the turbidity values, deriving parameters for the type and quantity of soil based on the turbidity and difference values, and establishing a rinse program based on the derived parameters.

Again, the Examiner has failed to satisfy the requirements for sustaining an obviousness-type double patenting rejection. The Examiner has failed to identify the differences between the inventions defined by the conflicting claims, or the reasons why a person of ordinary skill in the art would conclude that the invention of claim 12 would have been an obvious variation of the invention defined in claims 7 and 8 of the '304 application. Thus, the rejection is improper and should be withdrawn.

Nevertheless, claims 12, 16-17, and 19-20 do not raise any double-patenting issues with the claims of Application Serial No. 10/713,304 for the same reasons as with the '305 application. Namely, the claims of the '304 application determine turbidity values. In contrast, claim 12 of the current application determines a solubility of the soils in the wash liquid. Again, the Examiner is erroneously equating the determining of turbidity with the determining of solubility without any support for doing so. More specifically, claim 12 calls for determining solubility of soil on dishes and setting at least one operating parameter of a cleaning step based on the determined solubility. Nothing in claim 12 describes a dishwasher having upper and lower spray planes, alternately operating the upper and lower spray planes, measuring turbidity values associated with the upper and lower spray planes, deriving a difference value between the turbidity values, deriving parameters for the type and quantity of soil based on the turbidity and difference values, or establishing a rinse program based on the derived parameters. Claim 12 is patently distinct from claims 7 and 8 of Application Serial No. 10/713,304, and the process in each application is not functionally equivalent to the process in the other.

For these reasons, claims 12, 16-17, and 19-20 are not unpatentable for obviousness-type double patenting. Applicants request the withdrawal of the rejection, and the allowance of claims 12, 16-17, and 19-20.

**Claim Rejections - 35 U.S.C. §103(a)**

Claims 2, 8-10, and 12-20 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 3,888,269 to Bashark in combination with U.S. Patent No. 5,586,567 to Smith et al. The rejection is respectfully traversed.

Bashark '269 describes a turbidity sensor for a dishwasher wherein the degree of turbidity of the dishwashing liquid based upon outputs from the turbidity sensor is used to modify a generally standardized cleaning cycle comprising one or more generally standardized rinse cycles. Nothing in Bashark '269 even suggests determining the solubility of soil on dishes to be cleaned as a factor in modifying the cleaning cycle.

Smith '567 describes a dishwasher having a turbidity sensor which is installed in a cylindrical housing wherein the dishwasher is operated to minimize the generation of bubbles in the dishwashing fluid during the turbidity determination. Smith '567 defines turbidity as "a measure of the suspended and/or soluble soils in the fluid that causes light to be scattered or absorbed." *Col. 3, ln. 51-53*. Smith '567 does not disclose determining solubility of soil on dishes and setting at least one operating parameter of a cleaning step based on the determined solubility as called for in claim 12.

> A claimed invention is unpatentable if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art....The ultimate determination of whether an invention would have been obvious under 35 U.S.C. §103(a) is a legal conclusion based on underlying findings of fact.1
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> A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field....Close adherence to this methodology is especially important in

1 The underlying factual inquiries include (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; and (3) the differences between the claimed invention and the prior art. *Graham v. John Deere Co., 383 U.S. 1, 17, 15 L. Ed. 2d 545, 86 S. Ct. 684 (1966).*

> cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher."
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> Most if not all inventions arise from a combination of old elements....Thus, every element of a claimed invention may often be found in the prior art....However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention....Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant....Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.
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> The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved....In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references....The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art....Whether the Patent Office Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto....Broad conclusory statements standing alone are not "evidence."

*In Re Werner Kotzab, 217 F.3d 1365; 55 U.S.P.Q.2d (BNA) 1313 (Fed. Cir. 2000)*(citations omitted).

The Examiner has failed to identify any motivation, suggestion, or teaching of the desirability of combining Bashark '269 and Smith '567 to arrive at Applicants' invention. There has been no statement identified in the prior art, there has been no discussion of the knowledge of one of ordinary skill in the art or the nature of the problem to be solved, there has been no identification of what the combined teachings, the knowledge of one of ordinary skill in the art,

and the nature of the problem to be solved as a whole would have suggested to one of ordinary skill in the art as required for an implicit showing of motivation. The Examiner has failed to provide any particular findings related to any motivation, suggestion, or teaching of the desirability of combining Bashark '269 and Smith '567. Rather, the Examiner has simply relied upon "broad conclusory statements standing alone," which can only lead to the conclusion that the Examiner is simply relying on impermissible hindsight reconstruction of Applicants' invention. The rejection of claims 2, 8-10, and a 12-20 is improper and should be withdrawn.

Even if the rejection were proper, the combination of Bashark '269 and Smith '567 would still fail to arrive at Applicants' invention. There is no reference in either Bashark '269 or Smith '567 to determining the solubility of soil on dishes to be cleaned. Bashark '269 simply obtains turbidity readings from a turbidity sensor and utilizes an inferred level of turbidity to determine how the cleaning cycle should progress. Smith '567 simply obtains turbidity measurements at the end of selected operating cycles in order to eliminate the bubble generation typically experienced during turbidity measurements taken during the operating cycles. There is nothing in either Bashark '269 or Smith '567 to even suggest the process described by Applicants in claim 12. The combination of Bashark '269 and Smith '567 simply describes a turbidity sensor mounted in a housing wherein turbidity measurements are obtained at the end of selected operating cycles in order to eliminate the generation of bubbles in the dishwashing liquid in order to modify a generally standardized cleaning cycle comprising one or more generally standardized rinse cycles. This is not the invention described in claims 2, 8-10, and 12-20.

It is respectfully submitted that the Examiner is erroneously equating the determining of turbidity with the determining of solubility in forming the basis for the rejection. There is no teaching in either Bashark '269 or Smith '567 for equating these two distinct characteristics. Applicants' own application makes clear that these two terms are not equivalents as turbidity is only one factor used in determining solubility. Turbidity and solubility are characteristics of totally different aspects of the washing process. Turbidity is a characteristic of the liquid in the dishwasher whereas solubility is a characteristic of the food items on the dishes. Therefore,

turbidity and solubility are not equals. As such, it is impossible for the combination to reach claim 12 as the combination does not disclose determining solubility in any manner.

Claim 12 is not obvious in view of the combination because the combination does not disclose any way to determine solubility as required by claim 12. As such, the combination is missing an entire element of claim 12 rendering claim 12 novel and non-obvious over the combination.

For these reasons, claims 2, 8-10, and 12-20 are not unpatentable over Bashark '269 in combination with Smith '567. Applicants request the withdrawal of the rejection, and the allowance of claims 2, 8-10, and 12-20.

## CONCLUSION

For the reasons discussed above, all claims remaining in the application are allowable over the prior art. Early notification of allowability is respectfully requested.

Applicants respectfully request an Advisory Action be issued in this case. If there are any remaining issues which the Examiner believes may be resolved in an interview, the Examiner is respectfully invited to contact the undersigned.

Respectfully submitted,
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Dated: February 22, 2006

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